

We Claim:

1. A high refractive index, curable polyorganosiloxane composition useful for fabricating intraocular lenses, said composition comprising:

from about 30 wt% to about 55 wt% of a first vinyl terminated copolymer resin having from about 80 mole % to about 95 mole % dimethylsiloxane and from about 5 mole % to about 20 mole % diphenylsiloxane, said first vinyl terminated copolymer having a molecular weight sufficient to provide a first vinyl terminated copolymer viscosity of from about 400 cps to about 2500 cps;

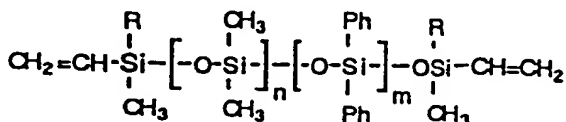
from about 45 wt% to about 70 wt% of a second vinyl terminated copolymer having from about 80 mole % to about 95 mole % dimethylsiloxane and from about 5 mole % to about 20 mole % diphenylsiloxane, said second vinyl terminated copolymer having a molecular weight sufficient to provide a second vinyl terminated copolymer viscosity of from about 2500 cps to about 9500 cps;

tetrakis(dimethylsiloxy)silane crosslinking reagent; and

from about 8 to about 25 parts of fumed silica filler per hundred parts resin.

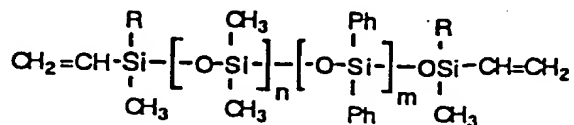
2. The high refractive index, curable polyorganosiloxane composition of claim 1, further including a platinum catalyst.

3. The high refractive index, curable polyorganosiloxane composition of claim 1, wherein said first vinyl terminated copolymer resin has the formula:



10 where R is a monovalent organic radical selected from the group consisting of CH₃ and CH=CH₂ and n + m is an integer sufficient to provide said first vinyl terminated copolymer viscosity of from about 400 cps to about 2500 cps.

3. The high refractive index, curable polyorganosiloxane composition of claim 1 wherein said second vinyl terminated copolymer resin has the formula:



10 where R is a monovalent organic radical selected from the group consisting of CH₃ and CH=CH₂ and n + m is an integer sufficient to provide said second vinyl terminated copolymer viscosity of from about 2500 cps to about 9500 cps.

5. The high refractive index, curable polyorganosiloxane composition of claim 1 wherein said first vinyl terminated copolymer resin comprises from about 12 mole % to about 18 mole % diphenylsiloxane.

6. The high refractive index, curable polyorganosiloxane composition of claim 1 wherein said second vinyl terminated copolymer resin comprises from about 12 mole % to about 18 mole % diphenylsiloxane.

7. The high refractive index, curable polyorganosiloxane composition of claim 1 wherein said first vinyl terminated copolymer resin viscosity is from about 400 cps to about 1000 cps.

~~8. The high refractive index, curable polyorganosiloxane composition of claim 1 wherein said second vinyl terminated copolymer viscosity is from about 4400 cps to about 5400 cps.~~

~~4. 8. The high refractive index, curable polyorganosiloxane composition of claim 1 wherein said fumed silica filler has an average particle diameter of from about 7 nanometers to about 11 nanometers.~~

~~10. The high refractive index, curable polyorganosiloxane composition of claim 1 further including an ultraviolet absorbing compound.~~

~~11. The high refractive index, curable polyorganosiloxane composition of claim 10 wherein said ultraviolet absorbing compound is vinyl hydroxyphenylbenzotriazole.~~

~~12. The high refractive index, curable polyorganosiloxane composition of claim 10 wherein said ultraviolet absorbing compound is silicone hydride hydroxyphenylbenzotriazole.~~

~~13. A high refractive index, curable polyorganosiloxane composition useful for fabricating intraocular lenses, said composition comprising:~~

~~a base resin comprising:~~

~~about 42 wt% to about 48 wt% of a first vinyl terminated copolymer having from about 82 mole % to about 88 mole % dimethylsiloxane and from about 12 mole % to about 18 mole % diphenylsiloxane, said first vinyl terminated copolymer having a molecular weight sufficient to provide a first vinyl terminated copolymer viscosity of from about 400 cps to about 1000 cps, and~~

about 52 wt% to about 58 wt% of a second vinyl terminated copolymer having from about 82 mole % to about 88 mole % dimethylsiloxane and from about 12 mole % to about 18 mole % diphenylsiloxane, said second vinyl terminated copolymer having a molecular weight sufficient to provide a second vinyl terminated copolymer viscosity of from about 4400 cps to about 5400 cps;

from about 11 to about 14 parts of fumed silica per hundred parts resin;

from about 5 to about 50 parts of platinum containing catalyst per million parts resin;

from about 1.5 to about 5 parts of tetrakis(dimethylsiloxy)silane crosslinking reagent per hundred parts resin; and

from about 0.1 to about 2 parts of an ultraviolet absorbing compound selected from the group consisting of hydroxybenzophenones and hydroxyphenylbenzotriazoles per hundred parts resin.

5. 14. The high refractive index, curable polyorganosiloxane composition of claim 13 wherein said fumed silica is surface treated with a member selected from the group consisting of hexamethyldisilazane and 1,3-divinyldisilazane.

15. The high refractive index, curable polyorganosiloxane composition of claim 13 wherein said ultraviolet absorbing compound is 2-[5-chloro-2H-benzotriazol-2-yl]-6-[1,1-dimethylethyl]-4-[2-propenyloxypropyl]phenol.

16. The high refractive index, curable polyorganosiloxane composition of claim 15 wherein said 2-[5-chloro-2H-benzotriazol-2-yl]-6-[1,1-dimethylethyl]-4-[2-propenyloxypropyl]phenol is hydrosilylated with tetrakis(dimethylsiloxy)silane.

17. The high refractive index, curable polyorganosiloxane composition of claim 15 wherein said 2-[5-chloro-2H-benzotriazol-2-yl]-6-[1,1-dimethylethyl]-4-[2-propenyloxypropyl]phenol is hydrosilylated with a terpolymer of dimethylsiloxane, diphenylsiloxane, and methylhydrosiloxane.

⁸~~18~~. The high refractive index, curable polyorganosiloxane composition of claim ^{7, 21, 22}~~13~~ wherein said fumed silica has an average particle size of about 7 nanometers to about 11 nanometers.

⁶~~19~~. An elastomeric, optically clear, high refractive index lens having superior post-folding optical resolution recovery, said lens comprising a polyorganosiloxane obtained by curing the curable, high refractive index, polyorganosiloxane composition of claim ^{1, 2}~~1~~.

~~20. The elastomeric, optically clear, high refractive index lens of claim 19 wherein said lens is an intraocular lens.~~